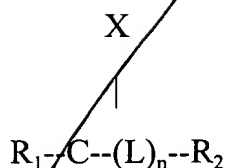


What is claimed is:

[illegible]

1. A compound of the formula:



wherein R_1 is a light-emitting moiety and R_2 is a bombesin-like peptide, fragment, derivative or analog thereof, and L is a linker moiety,

wherein n is 1 or 0, and $(\text{C}-\text{X})$ is selected from the group consisting of $\text{C}=\text{O}$, $\text{C}=\text{S}$, $\text{CH}(\text{OH})$, $\text{C}=\text{C}=\text{O}$, $\text{C}=\text{NH}$, CH_2 , $\text{CH}(\text{OR})$, $\text{CH}(\text{NR})$, $\text{CH}(\text{R})$, CR_3R_4 , and $\text{C}(\text{OR}_3)\text{OR}_4$ where R , R_3 , and R_4 are alkyl moieties or substituted alkyl moieties, and

wherein $(\text{L})_n-\text{R}_2$ is linked to $(\text{C}-\text{X})$ at L or at an amino acid position selected such that the compound exhibits substantial biological activity in the presence of a receptor having affinity for bombesin-like peptides, wherein said compound exhibits substantial biological activity in the presence of a receptor having affinity for bombesin-like peptides.

2. The compound of claim 1, wherein $n=1$ and R_2 is attached to R_1 via a linker moiety.

3. The compound of claim 1, wherein $n=0$ and R_2 is directly attached to R_1 .

4. The compound of claim 2 wherein the linker moiety is selected from the group consisting of include γ -aminobutyric acid, glycine, β -alanine, aminopentanoic acid, aminohexanoic acid, aminohepanoic acid, aminooctanoic acid, aminononanoic acid, aminodecanoic acid, aminoundecanoic acid, and aminododecanoic acid.

1 5. The compound of claim 1 wherein R₂ is comprised of Val-Pro-Leu-Pro-Ala-
2 Gly-Gly-Gly-Thr-Val-Leu-Thr-Lys-Met-Tyr-Pro-Arg-Gly-Asn-His-Trp-Ala-Val-Gly-
3 His-Leu-Met (SEQ ID NO:2).
4

5 6. The compound of claim 1 wherein R₂ is comprised of Gly-Asn-Leu-Trp-Ala-
6 Thr-Gly-His-Phe-Met (SEQ ID NO:3).
7

8 7. The compound of claim 1 wherein R₂ is comprised of Gly-Asn-His-Trp-Ala-
9 Val-Gly-His-Leu-Met (SEQ ID NO:4).
10

11 8. The compound of claim 1 wherein R₂ is comprised of Dphe-Gly-Trp-Ala-Val-
12 betaAla-His-Phe-Nle (SEQ ID NO:5).
13

14 9. The compound of claim 2, wherein R₂ is comprised of (SEQ ID NO:5) and is
15 attached to the linker γ -aminobutyric acid.
16

17 10. The compound of claim 1, wherein n=0 said amino acid position comprises
18 the N-terminus of said bombesin-like peptide.
19

20 11. The compound of claim 10, wherein said N-terminus of said bombesin-like
21 peptide is attached to (C-X) at α N-position.
22

23 12. The compound of claim 5, wherein said N-terminus amino acid residue is Val.
24

25 13. The compound of claim 6, wherein said N-terminus amino acid residue is Gly.
26

- 1 14. The compound of claim 7, wherein said N-terminus amino acid residue is Gly.
- 2
- 3 15. The compound of claim 8, wherein said N-terminus amino acid residue is
- 4 Dphe.
- 5
- 6 16. The compound of claim 1, wherein R_1 is bound, through C, to a region of said
- 7 R_2 peptide which is not involved in said biological activity.
- 8
- 9 17. The compound of claim 1, wherein said R_2 peptide binds to a human receptor.
- 10
- 11 18. The compound of claim 1, wherein said light-emitting moiety is selected from
- 12 the group consisting of Bodipy, fluorescein, FITC, Texas red, phycoerythrin, rhodamine,
- 13 carboxytetra-methylrhodamine, indopyras dyes, Cascade blue, coumarins, NBD, Lucifer
- 14 Yellow, propidium iodide, dinitrophenol (DNP), lanthanide cryptates, lanthanide chelates,
- 15 non-fluorescent dialdehydes which react with primary amines to form fluorescent
- 16 isoindoles, ALEXA dyes, dansyl, fluorescamine and dabcyI chloride, IAEDANS, long
- 17 lifetime dyes comprised of metal-ligand complexes (MLC) and derivatives thereof.
- 18
- 19 19. The compound of claim 1, wherein (C-X) is selected from the group
- 20 consisting of C=O and C=S.
- 21
- 22 20. The compound of claim 1, wherein said compound is a pharmaceutically
- 23 acceptable salt or complex thereof.
- 24
- 25 21. A method for labeling a receptor having an affinity for a bombesin-like
- 26 peptide by contacting said receptor with the compound of claim 1.

1 22. A method for generating a biologically active compound of claim 1,
2 comprising:
3 reacting R_1 and R_2 in an aqueous solution to form a mixture comprising the
4 compound of claim 1 and secondary compounds having biological activities less than
5 0.25% of the biological activity of R_2 -H in the presence of a receptor having affinity for
6 bombesin-like peptides;
7 contacting the mixture with a receptor for bombesin-like peptides; and
8 isolating from said mixture a light-emitting compound exhibiting substantial
9 biological activity in the presence of said bombesin-like peptide receptor.

10
11 23. The method of claim 22, wherein said isolating step comprises:
12 releasing said light emitting compound from said bombesin-like peptide receptor;
13 and
14 isolating said light-emitting compound.

15
16 24. The method of claim 23, wherein said step of isolating said light-emitting
17 compound includes selection by high pressure liquid chromatography.
18

19 25. A method for imaging cell receptor sites comprising contacting candidate cell
20 receptor sites with a compound of claim 1, and detecting said bound compounds as an
21 indication of said cell receptor sites.
22

23 26. A method of cell sorting comprising contacting a population of candidate cells
24 with a compound of claim 1, and isolating cells bound to said compound.
25

26 27. A method of flow cytometry comprising contacting a population of cells with

- 1 a compound of claim 1 and detecting cells bearing receptors on their surfaces by detecting
2 cells bound to said compound.

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